

University of Bridgeport
September HASP Status Report
Submitted September 30, 2016
Submitted: Jani Pallis Faculty Advisor

Team Activities:

Flight: Fort Sumner, NM

Josh Hauge and Larry Reed traveled to Fort Sumner Aug. 23rd-29th for the final integration and preparation for flight. The flight was operated from the University of Bridgeport and the university set up a dedicated computer room. Team members took shifts during the multiple “scrubbed” days and the 18-hour flight. We soon recognized that we could monitor and operate from the comfort of our homes, especially on “graveyard”. So two team members at a time handled graveyard hours and stayed in contact via text/phone/email.



Sam and Phil in “Mission Control”

Shipping:

Our payload was still operational when it returned.

Presentations:

Four members of the team were asked to make a presentation before the University of Bridgeport Board of Trustees on HASP. Phil Carroll, Josh Hauge, Maheshwari Kumar Rakkappan and Jani Pallis attended.

Payload 11 has been brought to different classes at UB for presentations and demonstrations such as ENGR 100 - Introduction to the Field of Engineering and MEEG 407 – Satellite Design. It will be on display and operated by team members with a continual slide presentation at the Discovery Museum and Planetarium on Aeronautics Day – Oct. 15th.

Data Analysis:

During the flight the servo-motors on the robotic arm worked with no degradation in performance. Three team members Maheshwari Kumar Rakkappan, Rothen Krishna Thashanath Sajeevan and Abd Elfatah Karkory have been assigned to summarize all the results from both the tests in Palestine, Texas and New Mexico.

USIP:

Connecticut Space Grant also has a USIP project to complete the robotic puppet. We attended the first USIP project meeting and are grateful to have been a part of HASP since we understand that we will be returning to Palestine and Fort Sumner for USIP work.

Issues:

Milestones Achieved:

Flight completed!

Current Team Leaders/Members, Demographics:

Student Project Manager: Bashar Alhafni (Undergraduate Student – Computer Science)

Leader Flight Computer, Data: Sam Zhang (Graduate Student – Computer Science/Electrical Engineering)

Palestine Student Team Leader: Phil Carroll (Undergraduate Student – Industrial Design)

Fort Sumner Team Leader: Josh Hauge (Undergraduate Student – Industrial Design)

Arduino Gesture Programming: Sam Zhang (Graduate – Electrical Engineering)

Structure Lead: Maheshwari Kumar Rakkappan - (Graduate Student – Mechanical Engineering). (Graduate Student – Mechanical Engineering). Rothen Krishna Thashanath Sajeevan (ME graduate student) and Karan Kakanur Patel (ME graduate student) joined the team.

Thermal Control: Maheshwari Kumar Rakkappan - (Graduate Student – Mechanical Engineering). Graduate Mechanical Engineering Abd Elfatah Karkory.

Robot Gesture Range of Motion and Fabrication: Phillip Carroll (Undergraduate Student – Industrial Design); Team Member: Josh Hauge

Power and Communications: Xuan (Sam) Zhang (Graduate Student – Computer Science/Electrical Engineering)

Lead Faculty Advisor: Dr. Jani Macari Pallis (Mechanical and Aerospace Engineering)

Faculty Advisor Dr. Neal Lewis (Technology Management - Project Management) – resigned from university.

Education Partner: David Mestre (Discovery Museum and Planetarium: Director of Space Sciences, responsible for Challenger Center Mission Control)

Education Partner: Lawrence Reed: (Discovery Museum and Planetarium: Electrical Engineering, Communications).

Engineering Volunteer: James J. Pallis (United Airlines – Mechanical Engineering Design)